



Switches Ethernet Industrial

IP67 - OCTOPUS



OCTOPUS 5TX

Industrial Networking:Industrial Ethernet:OCTOPUS System IP67:Switch

Product description	
Description	IP67 switch in accordance with IEEE 802.3, store and forward switching mode, ETHERNET (10 Mbit/s) and Fast-ETHERNET (100 Mbit/s)
Port type and quantity	5 x 10/100 BASE-TX, M12 D coding, 4-pole, 2-pair TP cable auto-crossing, auto-negotiation, auto-polarity
Type	OCTOPUS 5TX
Order No.	943 844-001
More Interfaces	
Power supply/signaling contact	1 M12 A coding 5-pole / no signal contact (fault relais)
Network size - length of cable	
Twisted pair (TP)	0 - 100 m
Network size - cascability	
Line - / star topology	any
Power requirements	
Operating voltage	24 V DC (-25% to +30%)
Power consumption	max. 2,4 W
Service	
Diagnostics	LEDs (power, link status, data)
Ambient conditions	
Operating temperature	0 °C to +60 °C
Storage/transport temperature	-25 °C to +70 °C
MTBF	143.6 years; MIL-HDBK 217F: Gb 25 °C
Mechanical construction	
Dimensions (W x H x D)	60 mm x 126 mm x 31 mm
Mounting	wall mounting
Weight	210 g
Protection class	IP 67
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2kV (linie/earth), 1 kV (linie/line), 1 kV data line
EN 61000-4-6 conducted immunity	10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (E175537) in preparation
Scope of delivery and accessories	
Scope of delivery	2 x covers for sealing unused ports labels, description and operating instructions

Accessories to order separately

M12 connector EM12S OCTOPUS,
order no. 934 445-001
patchcords EM12S 001Lxxxx OCTOPUS,
order no. 934 497-xxx
Bulkhead M12 to RJ45 EF12RJ45 OCTOPUS;
order no. 934 498-001



OCTOPUS 8M

Industrial Networking:Industrial Ethernet:OCTOPUS System IP67:Switch

Product description	
Description	Managed IP67 switch in accordance with IEEE 802.3, store and forward switching mode, ETHERNET (10 Mbit/s) and Fast-ETHERNET (100 Mbit/s)
Port type and quantity	8 x 10/100 BASE-TX, M12 D coding, 4-pole, 2-pair TP cable auto-crossing, auto-negotiation, auto-polarity
Type	OCTOPUS 8M
Order No.	943 368-001
More Interfaces	
Power supply/signaling contact	1 M12 A coding 5-pin connector
V.24 interface	1 M12 A coding 4-pin socket
Network size - length of cable	
Twisted pair (TP)	0 - 100 m
Network size - cascading	
Line - / star topology	any
Ring structure (HIPER-Ring)	50 (reconfiguration time <0,5 sec.)
Power requirements	
Operating voltage	9,6 to 32 V DC
Power consumption	max. 5 W
Current consumption at 24 V DC	210 mA
Service	
Diagnostics	serial interface, Web-Interface, SNMP V1/V2/V3, LLDP (HiVision/Industrial HiVision) LEDs (Power 1, Power 2, link status, Daten, redundancy manager, error), cable tester signal contact (24V DC / 1A), RMON (Statistik, Historie, Alarme, Ereignisse), Syslog, Portmirroring
Configuration	Command Line Interface (CLI), autoconfiguration adapter (ACA11), TELNET, BootP, DHCP Option 82, HiDiscovery
Security	Port security (MAC- und IP-adress), SNMPv3, Access Control to Agent (VLAN/IP), 802.1x
Other services	QoS 4 Klassen, Portpriorisierung (IEEE 802.1D/p), VLAN (802.1Q), Multicast (IGMP Snooping/Querier) GMRP, Broadcastlimiter, Flow Control IEEE 802.3x, Topology Discovery 802.1ad, PTP (Precision Time Protocol, IEEE 1588), SNTP (Simple Network Time Protocol), ACL, Traffic Shaping, Link Aggregation 802.1ad, MSTP 802.1s
Prepared for	ACL, Traffic Shaping, Link Aggregation 802.1ad, MSTP 802.1s
Redundancy	
Redundancy functions	HIPER-Ring (ring structure), RSTP (Rapid Spanning Tree Protocol), redundant network/ring coupling, (master/receiver), dual homing (master/receiver), redundant 24 V power supply
Ambient conditions	
Operating temperature	-25 °C bis +60 °C
Storage/transport temperature	-25 °C bis +70 °C
Mechanical construction	
Dimensions (W x H x D)	171 mm x 143 mm x 70 mm
Mounting	wall mounting, DIN rail mounting with adapter
Weight	1100 g

Protection class	IP 67
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13,2 Hz, 90 min.; 0,7g, 13,2 Hz - 100 Hz, 90 min.; 3,5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2kV (linie/earth), 1 kV (linie/line), 1 kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (pending)
Hazardous locations	cUL 1604 Class1 Div 2 (pending)
Germanischer Lloyd	pending
Scope of delivery and accessories	
Scope of delivery	covers for sealing unused ports, description and operating instructions
Accessories to order separately	DIN rail adapter order no. 943 xxx-xxx modem cable, shielded M12 4-pins on Sub-D 9-pins order no. 943 xxx-xxx field assembleable M12-connector EM12S OCTOPUS; order no. 934 445-021 patchcords EM12S 001Lxxxx OCTOPUS, order no. 934 497-xxx crossing M12 to RJ45 EF12RJ45 OCTOPUS; order no. 934 498-001

Comparison of selected products

OCTOPUS 5TX



OCTOPUS 8M



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Type	OCTOPUS 5TX	OCTOPUS 8M
Order No.	943 844-001	943 368-001
More Interfaces		
Power supply/signaling contact	1 M12 A coding 5-pole / no signal contact (fault relais)	1 M12 A coding 5-pin connector
V.24 interface		1 M12 A coding 4-pin socket
Network size - length of cable		
Twisted pair (TP)	0 - 100 m	0 - 100 m
Network size - cascability		
Line - / star topology	any	any
Ring structure (HIPER-Ring)		50 (reconfiguration time <0,5 sec.)
Power requirements		
Operating voltage	24 V DC (-25% to +30%)	9,6 to 32 V DC
Power consumption	max. 2,4 W	max. 5 W
Current consumption at 24 V DC		210 mA
Service		
		serial interface, Web-Interface, SNMP V1/V2/V3, LLDP (HiVision/Industrial HiVision)

Diagnostics	LEDs (power, link status, data)	LEDs (Power 1, Power 2, link status, Daten, redundancy manager, error), cable tester signal contact (24V DC / 1A), RMON (Statistik, Historie, Alarme, Ereignisse), Syslog, Portmirroring
Configuration		Command Line Interface (CLI), autoconfiguration adapter (ACA11), TELNET, BootP, DHCP Option 82, HiDiscovery
Security		Port security (MAC- und IP-adress), SNMPv3, Access Control to Agent (VLAN/IP), 802.1x
Other services		QoS 4 Klassen, Portpriorisierung (IEEE 802.1D/p), VLAN (802.1Q), Multicast (IGMP Snooping/Querier) GMRP, Broadcastlimiter, Flow Control IEEE 802.3x, Topology Discovery 802.1ad, PTP (Precision Time Protocol, IEEE 1588), SNTP (Simple Network Time Protocol),
Prepared for		ACL, Traffic Shaping, Link Aggregation 802.1ad, MSTP
Redundancy		
Redundancy functions		HIPER-Ring (ring structure), RSTP (Rapid Spanning Tree Protocol), redundant network/ring coupling, (master/receiver), dual homing (master/receiver), redundant 24 V power supply
Ambient conditions		
Operating temperature	0 °C to +60 °C	-25 °C bis +60 °C
Storage/transport temperature	-25 °C to +70 °C	-25 °C bis +70 °C
MTBF	143.6 years; MIL-HDBK 217F: Gb 25 °C	
Mechanical construction		
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Mounting	wall mounting	wall mounting, DIN rail mounting with adapter
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Protection class	IP 67	IP 67
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EMC interference immunity		
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EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)	10 V/m (80 - 1000 MHz)

EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line	2 kV power line, 1 kV data line
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EMC emitted immunity		
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A	EN 55022 Class A
Approvals		
Safety of industrial control equipment	cUL 508 (E175537) in preparation	cUL 508 (pending)
Hazardous locations		cUL 1604 Class1 Div 2 (pending)
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Scope of delivery and accessories		
Scope of delivery	2 x covers for sealing unused ports labels, description and operating instructions	covers for sealing unused ports, description and operating instructions
Accessories to order separately	M12 connector EM12S OCTOPUS, order no. 934 445-001 patchcords EM12S 001Lxxxx OCTOPUS, order no. 934 497-xxx Bulkhead M12 to RJ45 EF12RJ45 OCTOPUS; order no. 934 498-001	DIN rail adapter order no. 943 xxx-xxx modem cable, shielded M12 4-pins on Sub-D 9-pins order no. 943 xxx-xxx field assembleable M12-connector EM12S OCTOPUS; order no. 934 445-021 patchcords EM12S 001Lxxxx OCTOPUS, order no. 934 497-xxx crossing M12 to RJ45 EF12RJ45 OCTOPUS; order no. 934 498-001

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